

3. Some Australasian Spiders.

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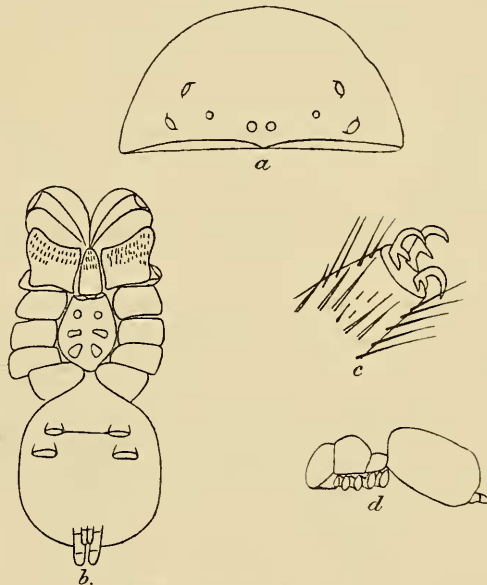
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(Text-figures 72-75*.)

Genus *MISSULENA* Walck.*MISSULENA* (*ERIODON*) *OCCATORIA* Walck.

Mr. W. J. Rainbow, F.L.S., of the Australian Museum, Sydney, was good enough to send me a female of the above genus, one of three found by him at Enfield, a suburb of Sydney.

Text-fig. 72.

*Missulena occatoria* Walck.

a. Eyes from above.

b. Under side of body. $\times 2$.

c. Tarsal claws.

d. Profile. Nat. size.

This agrees so closely with the description given by M. Lucas in 1865 (Ann. Soc. Ent. Fr. ser. 4, vol. v. p. 309, pl. 8) of the specimen identified by him as the above, the type species of the genus, by comparison with Walckenaer's original type, that I have no doubt of its being the same.

I give the following particulars as so little is known of the species; and as the two specimens (the type and M. Lucas's)

* NOTE.—The figures given in the eye-diagrams are $\frac{1}{10}$ millimetre.

formerly in the Museum of the Jardin des Plantes, Paris, have disappeared, this is probably the only specimen in Europe now available for reference.

The cephalothorax, mandibles, legs, and palpi are uniformly dark red-brown, smooth and shiny, the abdomen dark yellow-brown. The thoracic fovea is long, deep and procurved, and three deep radial indentations on either side of the thoracic part.

The four lateral eyes and front median pair are of the same size * (3), the laterals being raised, the medians sessile, their diameter apart. The intermediate row sessile and slightly smaller than the others ($2\frac{1}{2}$). They lie just above the level of the front row, which is straight and two-thirds of an eye-breadth from the margin of the clypeus. The distance between the posterior laterals is 43; between anterior and posterior laterals at each side 8; between the posterior laterals and intermediates at each side 9; between the intermediates 28; between the intermediates and the anterior median at each side $10\frac{1}{2}$; and between the anterior laterals and the medians at each side 20.

The rastellum consists of three rows of short stout spines. On the inner margin of the falx-sheath are about 9 large teeth. A few small intermediate and two large teeth, with thick fringe, on the outer margin.

There are numerous club-shaped spines on the fore part of the lip and on the maxillæ; the latter very square with a protuberance on the outer upper corner. The lip is rounded in front and twice as long as broad.

The sternal sigillæ are large and away from the margin.

The legs are short and stout. The three tarsal claws and female palp-claw are short, stout and well curved, with one long tooth near the base in each.

The abdomen is oval, high, slightly overhanging the cephalothorax, and thickly covered with smooth downlying hair. The spinnerets are short, the first joint of the superior pair is twice the length of the second; the inferior pair are as long as the second joint of the superior.

The measurements (in millimetres) are as follows:—

		Long.	Broad.			
Cephalothorax ...		$8\frac{1}{2}$	} 8 in front.			
			} 9			
Abdomen		13	11			
Mandibles		} $3\frac{1}{2}$ horizontally.		4 broad each.		
		} $6\frac{1}{2}$ vertically.				
		Trochanter Patella Metatarsus				
		Coxa.	& femur.	& tibia.	& tarsus.	
Legs	1.	$3\frac{1}{2}$	6	5	$4\frac{1}{2}$ = 19	
	2.	$3\frac{1}{2}$	6	5	$4\frac{1}{2}$ = 19	
	3.	$3\frac{1}{2}$	$6\frac{1}{2}$	5	5 = 20	
	4.	$3\frac{1}{2}$	8	6	6 = $23\frac{1}{2}$	
Palpi	3		5	$4\frac{1}{2}$	$2\frac{1}{2}$ = 15	
Superior spinnerets		$1\frac{1}{2}$,	$\frac{3}{4}$	$= 2\frac{1}{4}$.	Inferior $\frac{3}{4}$.	

* The figures are tenths of a millimetre.

These leg measurements are correct; they do not agree with L. Koch's, but he did not have a specimen and does not give his authority.

Genus HEXATHELE Ausserer.

Our knowledge of the small and little-known genus *Hexathele*, whose sole habitat lies in New Zealand, has recently been added to by two specimens from Auckland sent to the British Museum by the Rev. W. H. Webster; these and some others herein referred to, by the courtesy of Mr. A. S. Hirst, in charge of the collection of Arachnida, I have been able to examine.

The want of precision in the descriptions of some of the known specimens from different localities seemed at one time to render it doubtful whether they were really different from the type species *H. hochstetteri* Auss., of which the locality is only known as New Zealand; but, on revising those I have been able to see, with what has been written about others, I think it may now be taken that there are four separable species. Mr. Goyen's *H. petreii* from Otago is certainly very like the type species, but he specifies three points which if correctly described will make his species good. The male and female described by myself (Proc. Zool. Soc. 1901, p. 276) from Pahiatua, Wellington, N.Z., as *H. hochstetteri*, will form another, and I now record it as *Hexathele huttoni*, sp. n., after the sender the late Capt. Hutton. Those of Mr. Webster's are a fourth. They may be distinguished as follows:—

- a. Front median eyes one half their diameter apart.
Cephalothorax longer than patella *cum* tibia iv. *H. huttoni*, sp. n.
- b. Front median eyes their diameter apart.
Cephalothorax not longer than patella *cum* tibia iv.
- a*¹. Front median eyes the same distance from the front side eyes as from one another.
- a*². Front and rear rows of eyes of equal length; no spines on femoral or patellar joints of legs (*sec.* L. Koch).
Cephalothorax shorter than patella *cum* tibia iv. ... *H. hochstetteri* Auss.
- b*². Rear row of eyes shorter than front row; spines on femoral and patellar joints of all legs (*sec.* Goyen).
Cephalothorax as long as patella *cum* tibia iv. *H. petreii* Goyen.
- b*¹. Front median eyes not more than half their diameter from side eyes of same row. Cephalothorax shorter than patella *cum* tibia iv. *H. websteri*, sp. n.

The description of *H. huttoni* I have already furnished (*loc. cit.*) and now append that of *H. websteri*.

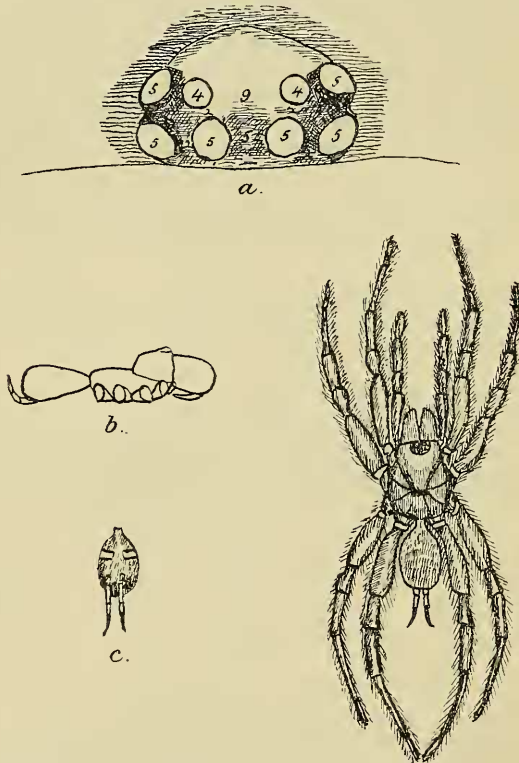
HEXATHELE WEBSTERI, sp. n.

Cephalothorax pale yellow-brown, almost bare, with a few short brown hairs at sides, slightly darker in the depressions and dark brown between the eyes. The mandibles are red-brown with long brown bristles on the inner side. Fangs black-brown. Pale orange fringes.

Maxillæ, lip, sternum, legs, and palpi yellow-brown. Abdomen yellow-brown, thinly covered with yellow-brown downlying hairs, longer and darker brown anteriorly; no discernible pattern. Hairs on under side darker yellow-grey, spinnerets the same.

The cephalothorax is flat, nearly bare, only slightly shorter than patella *cum* tibia iv., 2 mm. longer than broad; three side streaks; the transverse depression at end of cephalic part deep, short, and recurved; sides slightly rounded. The head part is all clearly raised above the thoracic, highest in front, and the eyes on a raised hillock about twice as long as broad. The first row of eyes is straight when seen from above but clearly procurved viewed from in front; the side eyes being almost close to the margin of the clypeus. The middle eyes of the front row are their diameter apart and half that distance from the side eyes and rear middle. The rear row is recurved; the oval laterals being as large as the same of the front row. The middle eyes of the rear row are nearly round.

Text-fig. 73.

*Hexathele websteri*, sp. n.

a. Eyes. | b. Profile. | c. Under side of abdomen.

The mandibles are prominent, longer than front patellæ without rastellum; a row of eleven large and two smaller teeth on inner

side of falk-sheath, a thick fringe on outer, and a median row of 6 or 7 quite small teeth at lower end.

The lip is broader than long, slightly hollowed in front, with a moderate number of dark brown short club-shaped spines in front. The latter also occur on inner lower corner of maxillæ; on the upper inner corner is a rounded apophysis. Light yellow-brown upstanding hair on both maxillæ and lip.

Sternum longer than broad, hollowed in front and pointed at rear end. Two moderately large sigillæ in hollow by lip, and three smaller each side nearly marginal.

The abdomen is oval. The superior spinnerets two-thirds the length of metatarsus of fourth pair of legs, tapering and rather divergent; the third pair of spinnerets being situated in a line with them just at their base, and the median pair lying between them.

The first, second, and third pairs of legs are of equal length. Eight or nine small teeth lie slopingly across the superior claws; inferior claws without teeth.

There are no scopula on any of the legs in the female.

This would appear to differ from *H. hochstetteri* Ausserer, besides being a good deal larger, in having the front middle eyes their diameter apart but less than half that distance from the side eyes, instead of the same distance. The row is straight instead of procurved. The lip is broader than long instead of same breadth. The superior spinnerets are only two-thirds the length of metatarsus iv. instead of (*sec.* Koch) the same length.

The measurements (in millimetres) are:—

		Long.		Broad.	
Cephalothorax ...		10½		} 6 in front. 8½	
Abdomen		9			5½
Mandibles		6			
		Coxa.	Tr. & fem.	Pat. & tibia.	Metat. & tars.
Legs	1.	5	9	9	9 = 32
	2.	5	9	9	9 = 32
	3.	4	8	9	11 = 32
	4.	4½	10	11½	} 9·4 13 = 39
Palpi		5	6	7	
Superior spinnerets		2¼	1¼	2½	= 6.

There are two females from Waiuku, Auckland, N. Z., sent by the Rev. W. H. Webster, after whom I have named them.

The following are from a small collection of Spiders forwarded to the British Museum, Nat. Hist. Dept., by the late Capt. Hutton and Mr. C. H. Tripp from Pitt Island, one of the Chatham group, some 500 miles east of New Zealand.

This includes two species of *Dolomedes* Latr., both apparently new, and I therefore describe them below. The only two species recorded from New Zealand are nearest to them in the genus.

L. Koch (Die Arach. Austr. vol. ii, p. 858) makes the following synopsis of his Australian and New Zealand species:—

- A. Cephalothorax longer than tibia iv.
- a.
- b. Eyes of second row markedly larger than the middle eyes of first row.
- a¹. No scopula on legs.
- b¹. The legs furnished with a scopula.
- a². Third pair of legs shorter than the second.
- a³. Scopula on front two pairs only (*sec.* Koch).
(I will add) Eyes of 2nd and 3rd rows of equal size ... *D. minor*, L. K.
(from New Zealand).
- b³. Scopula on all legs. Eyes of 2nd row clearly larger than those of 3rd.
- a⁴. Scopula on tarsi and metatarsi. Mandibles as long as front patella. Eyes dingy brown or black. Hair on abdomen upstanding, rough and coarse *D. huttoni*, sp. n.
- b⁴. Scopula on tarsi only. Mandibles longer than front patella. Eyes bright topaz-yellow. Hair on abdomen downlying, smooth and fine *D. trippi*, sp. n.
- b². Second and third pairs of legs of equal length. Scopula on all tarsi and metatarsi (*sec.* Koch). *D. imperiosus* L. K.
(from New Zealand).

DOLOMEDES HUTTONI, sp. n.

The cephalothorax is dark red-brown with short, smooth, yellow-brown hair, paler and more bristly round the margin and on the eye-space. The mandibles, lip, and maxillæ black-brown, with rather long upstanding brown hair and light red fringes.

Sternum and coxæ somewhat lighter brown, with thick yellow-brown hair and some upstanding dark brown hair mingled therewith.

Legs and palpi red-brown, thickly covered with yellow-brown hair. Abdomen above brown with dark yellowish-brown hair. A paler median longitudinal stripe on anterior half and two pairs of dark muscle-spots, followed by five transverse corrugations, the last close to posterior end. On under side thick rough yellow-brown hair, with a depressed shield pattern on which are two darker narrow longitudinal lines.

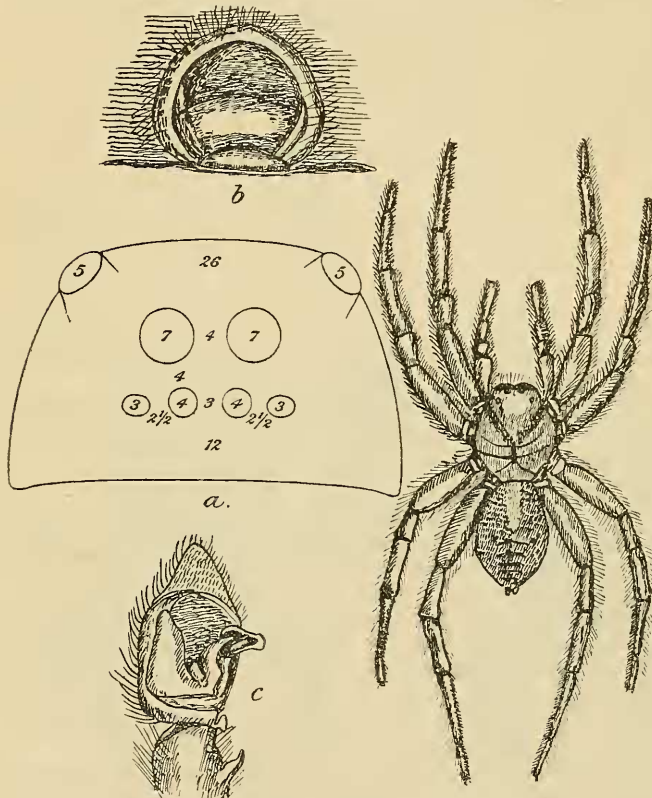
The cephalothorax is rounded at the sides, the cephalic part only slightly raised up; a long deep longitudinal fovea and well-marked side stripes on the thoracic part. The eyes of the second row are not quite twice the diameter of the front median, from which and from one another they are the latter's diameter distant. The front laterals are three-quarters the diameter of the median which are that distance apart, side eyes from middle rather less. The oval eyes of the third row are smaller than those of the second, but larger than the front median.

The margin of the clypeus is three diameters of the front median eyes distant from them.

The mandibles are kneed at the base and as long as the patella of the front pair of legs; on the inner margin of the falx-sheath are four large teeth, and on the outer margin one large between two small teeth and a thick fringe.

The lip is as broad as long, straight in front, and rounded at the sides, about half the length of the maxillæ, which are well rounded on the outer side and upper half.

Text-fig. 74.

*Dolomedes huttoni*, sp. n. Female.

a. Eyes*. | b. Epigyne. | c. Male palp.

The abdomen is straight in front, broadest two-thirds of its length down and rounded at posterior end; the hair coarse and rough.

* The figures are tenths of a millimetre; the figure 26 between the oval eyes of the third row should be 30.

The legs are stout with scopula on all the tarsi and metatarsi, on the under side of which latter are long powerful spines. There is one spine on tibia iv. above, none on the others. The rather long superior claws have about 7 short pectinations. The inferior claw is bare.

The palpi have tibial joint slightly longer than the patella and the anterior end of the distal joint is rather club-shaped.

The measurements of the female (in millimetres) are as follows. The male is rather smaller.

		Long.	Broad.		
Cephalothorax ...		13½	} 5 in front. 10½		
Abdomen		14½			10
Mandibles		6			
		Coxa.	Tr. & fem.	Pat. & tib.	Metat. & tars.
				} 5½ 7½	
Legs	1.	4½	11		13
	2.	4½	10½	12½	11½ = 39
	3.	4	10	12	11 = 37
	4.	4½	13	14	14 = 45½
Palpi		2½	6	5	5 = 18½

There are nine females and seven males (nearly all immature) from Pitt Island (Chatham Islands).

I have named the species after the late Capt. Hutton of Christchurch, who forwarded these specimens to England.

DOLOMEDES TRIPPI, sp. n.

The cephalothorax is dark yellow-brown with pale yellow downy hair. In the female there are lateral longitudinal stripes between the median line and the margin but none at the margin. The eyes are bright topaz-yellow.

The mandibles are black-brown with thin upstanding brown hair and yellow-brown fringes. The lip and maxillæ are lighter brown with brown upstanding hairs; the sternum paler with yellowish-brown hair.

The legs and palpi are lighter brown, with upstanding brown and downy pale yellow-brown hairs.

The abdomen above is thickly covered with smooth downy pale yellow-brown hair mottled with dark grey. The sides are darker, and a long narrow median space underneath is darker still.

The head part of the cephalothorax is rather prominent.

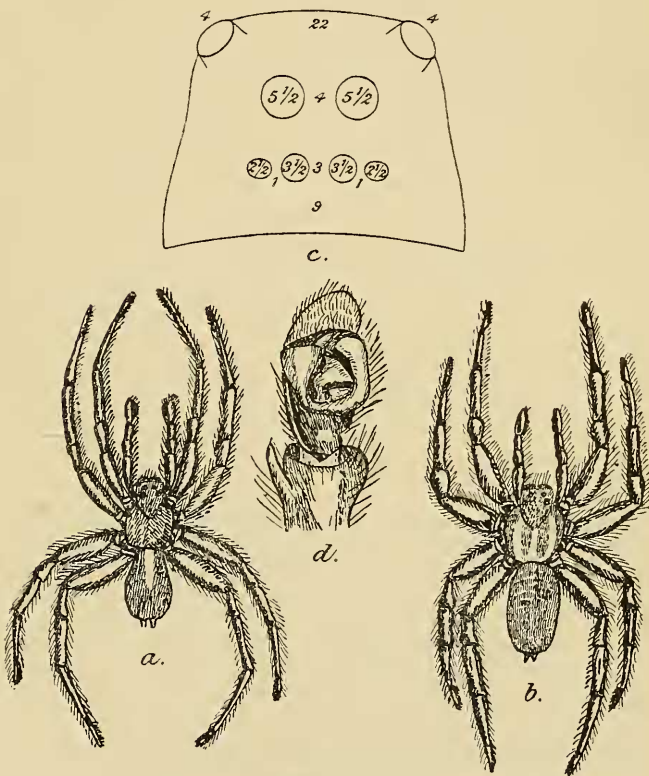
The clypeus is not quite so broad as the two front median eyes and the space between them, which latter is rather less than their diameter. The side eyes are smaller and nearly close up to the former. The eyes of the middle row are half as wide again as the front median, being rather farther from them than the diameter of the latter and the same distance from one another.

The oval eyes of the third row are in their long diameter smaller than those of the second row but larger than the front median.

The mandibles are longer than patella of front pair of legs, they are stout and kneed at the upper half. There are four large teeth on the inner margin of the falx-sheath, one large between two small teeth and a thick fringe on the outer margin.

The lip is broader than long, rounded in front, and half the length of the maxillæ.

Text-fig. 75.

*Dolomedes trippi*, sp. n.

a. Male. | b. Female. | c. Eyes. | d. Male palp.

The abdomen is somewhat cylindrical, straight at the sides and rounded at front and rear. The spinnerets small and quite terminal.

The legs are stout; the first and second pairs are equally long in the female, but in the male the first pair is the longer of the two.

There are scopula on the tarsi of all legs. One spine above on tibia iv.

Besides being larger this species differs from *D. minor* L. Koch, to which it is rather close, in having scopula on all the tarsi, instead of on the front two pairs only, in its mandibles longer than instead of equal to the front patella. The patellar joint of palpi equal to instead of shorter than the tibial; and the clypeus more than twice as broad as the distance between the front median and second row eyes, instead of only slightly more.

The measurements (in millimetres) are as follows:—

		Female.					
		Long.	Broad.				
Cephalothorax ...	9	{ 4 in front.					
		{ 8					
Abdomen	13	7					
Mandibles	4½						
		Coxa.	Tr. & fem.	Pat. & tib.	Metat. & tars.		
Legs	1.	3	9	{ 3½ 6½	9 =	31	
	2.	3	9	{ 10	9 =	31	
	3.	2½	9	9	8½ =	29	
	4.	3	10	10	10 =	33	
Palpi	2	5	4	3½	=	14½	

		Male.					
		Long.	Broad.				
Cephalothorax ...	9	{ 3¾ in front.					
		{ 6½					
Abdomen	9	5½					
Mandibles	4	longer than front patella.					
		Coxa.	Tr & fem.	Pat. & tib.	Metat. & tars.		
Legs	1.	3	9½	11	11 =	34½	
	2.	3	9	10½	10½ =	33	
	3.	2½	9	9½	9½ =	30½	
	4.	3	10	11	12 =	36	
Palpi	2	6	4	4	=	16	

There are one male and one female from Pitt Island. I have named them after C. H. Tripp, Esq., by whom they were collected.